Form 610014wd 03-00 <u>U.S.</u>

lowa Department of Transportation

Office of Design Soils Design Section

sian No.	113

Date Reported

SUPPLEMENTAL REPORT OF BRIDGE SOUNDINGS

Project BRF-196-1(14)--38-81

Type and S	pe and Size of Bridge 264'-0 X 60' PPCBB												Road No. IA 196 County SAC							
Bridge over	CED	AR CR	REEK				at S	Sta. 1072	2+00.60											
				-																
Test Hole No.	Layer	*Core Type	De From	pth To	Blows .5' Seat	Blows 1 st .5'	Blows 2 nd .5'	Blows Per Foot	PSF Cohesion	Friction	**Test	Density Pct.	Mois %			HTO ass		Rem	arks	
B-0188	C1	ST	4.0	5.0	2	2	4	6												
S ABUT	C2	ST	9.0	10.0	6	29	31	60												
	C3	ST	14.0	15.0	60	100									removed to the con-			0.1 F	PEN.*	
	C4	ST	19.0	20.0	64	100										`,		0.1 F	PEN.*	
	D	ST	24.0	25.0	17	73	9	82												
	E1	ST	29.0	30.0	3	6	8	14												
	E2	ST	34.0	35.0	6	8	10	18												
	F1	ST	39.0	40.0	6	12	18	30								. Alverta				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	F2	ST	44.0	45.0	12	22	27	49												
	F3	ST	49.0	50.0	15	23	30	53												
	F4	ST	59.0	60.0	6	16	21	37												
	F5	ST	69.0	70.0	11	20	29	49												
																	,	BOUL	DERS	}
Station \mathcal{L}	3oth A	butmer	its	estimated	l consolidati	on of	0.05	feet in	Variabe	F f	eet thick			Perce	ent	10	30	50	70	90
														Days		Essen	ially	Inst	antan	eous
compressible layers under the 6-12 feet embankment at the following rate: Recommendations: No apparent stability or settlement problems as designed. Consider steel H piles with primary support in deep glacial profile shown on SPS sheets. Consider driving points to help penetrate boulders identified in Boring B-0188. No identifiable need to adjust scour information included an Situation Plan.																				
in done about Datile shows on SPS sheets, Consider driving points to help penetrate builders identified in																				
Resident	D NO	Q M	11.4	: 6.11	0 6000	to	" t es	aur Int	armoti.	to had	ludad.	9 1 5	tuck	· · ·	Plan			1/ \ \		
woring.	0-018	0. 110	1 de VI	1 riable	e need	in ad	45/ 36	var IM	viria 110	n INC	MARA	011 21	1441	100	I IU(P	1				

*SH – Shelby Tube Core ST – Split Tube Core

DC - Diamond Core

*UU – Unconsolidated Undrained (Triaxial) CU – Consolidated Undrained (Triaxial)

UC – Unconfined Compression (Cohesion = ½ U.C. Strength)

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Office of Design Soils Design Section SUPPLEMENTAL REPORT OF BRIDGE SOUNDINGS

Design No.	113	File No.	30534	Date Reported	9-29
3					

Project BRF-196-1(14)--38-81

Type and Size of Bridge 264'-0 X 60' PPCBB	Road I	lo. IA 196 Co	ounty SAC
Bridge over CEDAR CREEK	at Sta. 1072+00.60		
		D 11 Minton	AAGUTO

Test	Lavor	*Core	De	pth	Blows	Blows	Blows	Blows	PSF	Friction	**Test	Density	Moisture		SHTO		Rem	arks	
Hole No.	Layer	Туре	From	То	.5' Seat	1 st .5'	2 nd .5'	Per Foot	Cohesion	11100011	1000	Pct.	%		lass				
B-0189	В	ST	4.0	5.0	6	8	10	18											
SPIER	-C1	ST	9.0	10.0	14	18	12	30											
	C2	ST	14.0	15.0	6	8	13	21					-						
	D	ST	19.0	20.0	6	11	13	24											
	E1	ST	29.0	30.0	8	17	16	33											
	E2	ST	39.0	40.0	9	25	40	65											
	E 3	ST	49.0	50.0	4	12	20	32											
	E4	ST	59.0	60.0	12	18	25	43											
	E5	ST	69.0	70.0	14	21	30	51											
							-								_				
tation				estimated	l consolidati	on of		feet in		f	eet thick		Perc	ent	10	30	50	70	9
					t embankme								Days	3					
mhiessir	ne layers t	ander trie			CHIDAIRIN	on at the lo	nowing rate	•						-					

*SH – Shelby Tube Core ST – Split Tube Core DC – Diamond Core

*UU – Unconsolidated Undrained (Triaxial)
CU – Consolidated Undrained (Triaxial)
UC – Unconfined Compression (Cohesion = ½ U.C. Strength)

Form 610014wd 03-00 <u>U.S.</u>

lowa Department of Transportation

Office of Design Soils Design Section SUPPLEMENTAL REPORT OF BRIDGE SOUNDINGS

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__ File No. 30534

Date Reported 9-29-1

Project BRF-196-1(14)--38-81

Type and S	Type and Size of Bridge 264'-0 X 60' PPCBB Road No. IA 196 County SAC Bridge over CEDAR CREEK at Sta. 1072+00.60																		
Bridge over	CED	AR CR	EEK				at 9	Sta. 1072	2+00.60										
Test Hole No.	Layer	*Core Type	De From	pth To	Blows .5' Seat	Blows 1 st .5'	Blows 2 nd .5'	Blows Per Foot	PSF Cohesion	Friction	**Test	Density Pct.	Moisture %		SHTO lass		Rem	narks	-
B-0190	B1	ST	4.0	5.0	3	4	6	10											
N ABUT	B2	ST	9.0	10.0	2	2	2	4											
	D1	ST	14.0	15.0	2	6	10	16											
	D2	ST	19.0	20.0	7	9	10	19											
	D3	ST	24.0	25.0	7	7	15	22							v.				
	E1	ST	29.0	30.0	15	21	10	31											
	E2	ST	34.0	35.0	5	7	9	16											
	F1	ST	39.0	40.0	8	13	24	37											
	F2	ST	49.0	50.0	15	23	30	53											
	F3	ST	59.0	60.0	56	51	39	90											
	F4	ST	69.0	70.0	19	26	34	60											
	F5	ST	79.0	80.0	15	18	33	51											
																	1		
Station				estimated	consolidati	on of		feet in	•	f	eet thick		Per	cent	10	30	50	70	90
compressib	ole layers ι	under the		fee	t embankme	ent at the fo	ollowing rate	:					Day	/s					
	Compressible layers under the feet embankment at the following rate: Recommendations:																		
Recommen	idations:																		
				Andrews .															

*SH – Shelby Tube Core ST – Split Tube Core DC – Diamond Core

*UU – Unconsolidated Undrained (Triaxial) CU – Consolidated Undrained (Triaxial) UC – Unconfined Compression (Cohesion = ½ U.C. Strength)

Form 610010Ewd 11-08

ENGLISH

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		MO / DA / YR
DATE	80	/ 10 / 2011

Office of Road Design (Soils) **Report of Bridge Soundings**

CHIEF OF PARTY

			196	TOWNSHIP	CEDA		E OVER	•		SECTION 19/20 PROJECT BRF-196-1(14)38-81 AT STATION 1072+00.6
		C ORD	INATE			DEPTH				LOG OF HOLE
STATION	+	LT CL RT	DIST	ELEVA [*]	TION	TO WATER FEET				DESCRIPTION OF MATERIAL
1071	30	RT	32	1183	00	8.5	0	60	Α	SOFT SILTY CLAY LOAM TOPSOIL
						PLUGGED	3	00	В	SOFT SILTY SANDY CLAY
							25	00	С	MEDIUM SAND W/ GRAVEL AND BOULDERS
							33	00	D	MEDIUM SAND
							75	00	E	FIRM TO VERY FIRM GLACIAL CLAY
1070	68	LT	50	1181	46	8.0	0	60	Α	SOFT SILTY CLAY LOAM TOPSOIL
						PLUGGED	3	00	В	STIFF SILTY SANDY CLAY W/ GRAVEL AND BOULDERS
NO WATER USED							23	00	С	GRAVELLY SAND WITH BOULDERS
							28	00	D	MEDIUM SAND WITH OCC BOULDERS
							35	00	Е	STIFF TO FIRM GLACIAL CLAY
							70	00	F	FIRM TO VERY FIRM GLACIAL CLAY
1071	30	RT	34	1184	12	12.0	0	30	Α	SOFT SILTY CLAY LOAM TOPSOIL
						PLUGGED	7	00	В	STIFF SILTY SANDY CLAY W/ GRAVEL AND BOULDERS
NO WATER USED							18	00	С	MEDIUM GRAVELLY SAND W/ BOULDERS
							25	00	D	FIRM TO VERY FIRM GLACIAL CLAY
							70	00	Е	VERY FIRM GLACIAL CLAY W/ OCC BOULDERS AND SAND SEAMS
	STATION 1071 1071 1071	STATION + 1071 30 1070 68 NO WATER USED 1071 30	STATION	STATION C ORDINATE LT CL RT DIST RT	STATION C ORDINATE SURF, ELEVAL	STATION	STATION	STATION	STATION	C C C C C C C C C C

PAGE 1 OF 2

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Form 610010Ewd

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Office of Road Design (Soils) Report of Bridge Soundings

RANGE 35W

SECTION 19/20

PROJECT BRF-196-1(14)--38-81

CHIEF OF PARTY

COUNTY SAC	R	OUTE N	IO. IA	196	TOWNSHIP	CEDA				= 35W	SECTION 19/20 PROJECT BRF-196-1(14)38-81
TYPE AND SIZE OF	F BRIDGE 264' X 60	PPCBB					BRIDG	E OVER	CEDA	R CREEK	AT STATION 1072+00.6
			,		T						
TEST HOLE			C ORE	DINATE	0.155		DEPTH				LOG OF HOLE
NUMBER	STATION	+	LT CL RT	DIST	SURFA ELEVA	TION	TO WATER FEET	T FE	O ET		DESCRIPTION OF MATERIAL
B-0190	1074	32	LT	18	1210	7	30.0	0	60	Α	ROADMETAL GRAVEL
N ABUT								10	00	В	SOFT TO STIFF SILTY SANDY CLAY FILL
WASH BORE	NO WATER USED							14	00	С	STIFF SILTY SANDY CLAY
								25	00	D	MEDIUM SAND
								35	00	Е	GRAVELLY SAND W/ OCC BOULDERS
								80	00	F	FIRM TO VERY FIRM GLACIAL CLAY
B-0191	1073	52	LT	6.0	1207	9	32.0	1	00	Α	CONCRETE ROADMETAL
N ABUT							PLUGGED	18	00	В	SOFT TO STIFF SILTY SANDY CLAY FILL
								30	00	С	MEDIUM SAND WITH GRAVEL AND BOULDERS
								80	00	D	FIRM TO VERY FIRM GLACIAL CLAY
B-0192	1072	66	RT	6.0	1205	3	27.8	17	80	Α	BRIDGE DECK TO GROUND
N PIER								20	00	В	RIP RAP
								34	00	C	GRAVELLY SAND W/ BOULDERS
								80	00	D	FIRM GLACIAL CLAY
		-									

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